

AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1-9. (Cancelled)

10. (Currently Amended) A laser comprising:

a resonator which is limited by an end mirror and an output mirror and in which a fibre is arranged that comprises an active core and can be stimulated by pump radiation to have multi-mode laser activity such that a plurality of transverse modes occur in the resonator, the output mirror having an inner region and an outer region,

wherein mode mixing occurs in the active core ~~the fibre~~, and

wherein the output mirror has reflective properties for laser and pump radiation varying between the outer region and inner region,

such that the outer region of the output mirror reflects essentially all pump radiation as well as essentially all laser radiation, ~~except laser radiation falling on an inner region of said output mirror, and~~

such that said inner region reflects essentially all pump radiation, but said inner region being of lower reflectance for the laser radiation enabling laser radiation to be transmitted therethrough, whereby said output mirror predominantly couples out low transverse modes.

11. (Original) The laser of claim 10, wherein said fibre has a layout in loops or in bends so as to promote mode mixing.

12. (Original) The laser of claim 10, wherein the fibre active core has a D-shaped cross section.

13. (Original) The laser of claim 10, wherein said output mirror is exchangeable, thereby providing for switching a wavelength of the laser or a diameter of a laser beam emitted from the laser.

14. (Original) The laser of claim 10, wherein the output mirror is exchangeable and comprises an inner zone and an outer zone surrounding said inner zone.

15. (Original) The laser of claim 14, wherein said outer zone reflects laser radiation and pump radiation and said inner zone has a lower reflectivity for laser radiation than the outer zone.

16. (Original) The laser of claim 14, wherein the inner zone is not coaxial to the radiation exiting from the active core.

17. (Original) The laser of claim 14, wherein the inner zone is generally circular, having a smaller diameter than the diameter of the active core.

18. (Original) The laser of claim 10, further comprising beam-expanding optics arranged between an end of the fibre and the output mirror.

19. (Currently Amended) A method of generating a laser beam from a laser, the laser comprising a resonator limited by an end mirror and an output mirror, the output mirror having an outer region and an inner region, and a fibre comprising an active core and stimulated by pump radiation to have multi-mode laser activity such that a plurality of transverse modes occur in the resonator, wherein mode mixing occurs in the active core proximate an end of the fibre, and wherein the output mirror has ~~varying~~ reflective properties for laser and pump radiation varying between the outer and inner regions,

such that the outer region of the output mirror reflects essentially all pump radiation and essentially all laser radiation, and ~~except laser radiation falling on an inner region of said output mirror,~~

such that said inner region reflects essentially all pump radiation, but said inner region being of lower reflectance for the laser radiation enabling laser radiation to be transmitted therethrough, thereby coupling out low transverse modes, the method comprising activating said laser.

20. (Currently Amended) A method of manufacturing a laser, comprising:

providing a pumping source; and

positioning a fibre between an end mirror and an output mirror such that said pumping source will emit a light beam directed at said end mirror, said output mirror having an inner region and an outer region,

wherein said fiber comprises an active core and can be stimulated by pump radiation to have a multi-mode laser activity such that a plurality of transverse modes,

wherein mode mixing occurs in the active core ~~said fibre~~ when said laser is activated; and
wherein said output mirror has reflective properties for laser and pump radiation varying
between the outer and inner regions,

such that the outer region of the output mirror reflects essentially all pump radiation and
essentially all laser radiation, and ~~except laser radiation falling on an inner region of said output~~
~~mirror,~~

such that said inner region reflects essentially all pump radiation, but being of lower
reflectance for the laser radiation enabling laser radiation to be transmitted therethrough, thereby
coupling out low transverse modes.

21. (Original) The method of claim 20, wherein said fibre looped so as to promote mode
mixing.

22. (Original) The method of claim 20, wherein said fibre is bent so as to promote mode
mixing.

23. (Original) The method of claim 20, wherein the output mirror is exchangeable and
comprises an inner zone and an outer zone, thereby providing for switching a wavelength of a
beam emitted by the laser or a diameter of a beam emitted by the laser.

24. (Original) The method of claim 23, wherein said inner zone is not coaxial to radiation
emitted from the active core.

25. (Original) The method of claim 23, wherein the inner zone is generally circular and having a smaller diameter than a diameter of the active core.

26. (Original) The method of claim 20, wherein the laser further comprises beam-expanding optics arranged between an end of the fibre and the output mirror.